**Maryland Historical Trust**

Maryland Inventory of Historic Properties number: B-4636

Name: WILTON PARKWAY OVER GRASTON RUN

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

**MARYLAND HISTORICAL TRUST**

Eligibility Recommended ___X___ Eligibility Not Recommended _____

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

_____

_____

Reviewer, OPS: Anne E. Bruder Date: 3 April 2001

Reviewer, NR Program: Peter E. Kurtze Date: 3 April 2001

**MARYLAND INVENTORY OF HISTORIC BRIDGES** **MHT No.** B-4636
**HISTORIC BRIDGE INVENTORY**
**MARYLAND STATE HIGHWAY ADMINISTRATION/**
**MARYLAND HISTORICAL TRUST**

**SHA Bridge No.** BC 2209 **Bridge name** Hilton Parkway over Gelston Run

**LOCATION:**
**Street/Road name and number [facility carried]** Hilton Parkway

**City/town** Baltimore City **Vicinity** _____

**County** Baltimore

**This bridge projects over: Road**_____ **Railway**____ **Water** X **Land** _____

**Ownership: State** _____ **County** _____ **Municipal** X **Other** _____

**HISTORIC STATUS:**
**Is the bridge located within a designated historic district?** **Yes** _____ **No** X
**National Register-listed district** _____ **National Register-determined-eligible district** _____
**Locally-designated district** _____ **Other** _____

**Name of district** _____

**BRIDGE TYPE:**
**Timber Bridge** :
**Beam Bridge** _____ **Truss -Covered** _____ **Trestle** _____ **Timber-And-Concrete** _____

**Stone Arch Bridge** _____

**Metal Truss Bridge** _____

**Movable Bridge** _____:
**Swing** _____ **Bascule Single Leaf** ____ **Bascule Multiple Leaf** ____
**Vertical Lift** _____ **Retractile**_____ **Pontoon** _____

**Metal Girder**_____:
**Rolled Girder** _____ **Rolled Girder Concrete Encased** _____
**Plate Girder** _____ **Plate Girder Concrete Encased** _____

**Metal Suspension** _____

**Metal Arch** _____

**Metal Cantilever** _____

**Concrete** X :
**Concrete Arch** X **Concrete Slab**_____ **Concrete Beam** _____ **Rigid Frame** _____
**Other** _____ **Type Name** _____

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**DESCRIPTION:**

**Setting: Urban** __X__ **Small town** _____ **Rural** _____

**Describe Setting:**

Bridge No. BC 2209 carries Hilton Parkway over Gelston Run in Baltimore City. Hilton Parkway runs north-south and Gelston Run flows east-west. The bridge is located in the City of Baltimore and is surrounded by residential neighborhoods and the Gwynn's Falls Park.

**Describe Superstructure and Substructure:**

Bridge No. BC 2209 is a 1-span, 4-lane, filled spandrel, concrete arch bridge, faced in granite. The bridge was originally built in 1938; the bridge was widened and sidewalks were added in 1992. The structure is 23.16 meters (76 feet) long and has a clear roadway width of 17.6 meters (58 feet); there is one sidewalk measuring 1.5 meters (5 feet) wide and a center median which is .9 meters (3 feet) wide. The out-to-out width is 20.7 meters (68 feet). The superstructure consists of one arch which supports a concrete deck with a bituminous wearing surface. The arch spans 19.87 meters (65.2 feet) with a clear height of 10.43 meters (34.25 feet). The west side of the bridge has a concrete parapet, faced in stone, with a metal railing. The east parapet has a concrete parapet which is faced in stone. The roadway approaches have metal guardrails. A date plaque on the west parapet identifies the structure as the "Hilton Parkway Bridge". The substructure consists of two concrete abutments and four u-shaped wingwalls , all faced in granite.

According to the 1995 inspection report, this structure had fine transverse cracks on the underside of the deck slab overhang. In addition, the joints between the arch concrete and the stone veneer had efflorescence throughout. There was also hairline map cracking and light efflorescence throughout the arch intrados and the southeast wingwall had a crack in the stone masonry. In addition, there was heavy vegetation along all the wingwalls.

**Discuss Major Alterations:**

In 1992, the bridge was widened and a sidewalk was added, which cantilevers over the west side of the bridge. The original clear roadway width of 12.19 meters (40 feet) was widened to the present 17.6 meters (58 feet). The widening project, including the sidewalk structure, which cantilevers over the west elevation, the increased roadway width and the center median increased the out-to-out width from 16.8 meters (55.16 feet) to 20.7 meters (68 feet). The original stone parapets on the structure were removed during the 1992 widening and replaced with concrete parapets, faced in stone. The new widened section of the bridge, as well as the new parapets were faced in stone to match the original 1938 section of the structure.

**HISTORY:**

**WHEN was the bridge built:** 1938/1992
**This date is: Actual** X **Estimated** _____
**Source of date: Plaque** X **Design plans** X **City bridge files/inspection form** X
**Other (specify):** _____

**WHY was the bridge built?**

The bridge was constructed to span Gelston Run in the area of Gwynn's Falls Park when Hilton Parkway from Edmondson Avenue to North Avenue was improved.

**WHO was the designer?**

City of Baltimore, Department of Public Works

**WHO was the builder?**

City of Baltimore, Department of Public Works

**WHY was the bridge altered?**

The bridge was altered to provide a wider roadway clearance and to accommodate pedestrians.

**Was this bridge built as part of an organized bridge-building campaign?**

The bridge was constructed as a component of the improvement project for Hilton Parkway from Edmondson Avenue to North Avenue. The project, started in 1936, was completed and opened to traffic November 10, 1938, and included the grading of the highway and the construction of two bridges (including Bridge BC 2209).

**SURVEYOR/HISTORIAN ANALYSIS:**

**This bridge may have National Register significance for its association with:**

**A - Events** _____ **B- Person** _____

**C- Engineering/architectural character** ___X___

This bridge is eligible for the National Register as a significant example of a concrete bridge. Although is has been widened and the parapets replaced, it is representative of bridge design developed for parklands in the 1930s. In addition, the alterations to the structure were undertaken in a manner consistent with the recommended approaches in the Secretary of the Interior's *Standards for Rehabilitation*, that is, the cantilevered sidewalk and new parapets were faced in stone to identically match the existing bridge.

**Was the bridge constructed in response to significant events in Maryland or local history?**

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic , with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's. Most improvements to local roads waited until the years after World War I.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Concern with aesthetic treatment of bridges designed for city park settings was addressed by engineers in the early twentieth century. Henry G. Tyrell's 1912 book *Artistic Bridge Design* laid out some of these rules. Tyrell, a prominent designer and prolific author of engineering treatises, subtitled this book *A Systematic Treatise on the Design of Modern Bridges According to Aesthetic Principles*. Tyrell set forth the following criteria for beautiful bridges:

1. Conformity with environment
2. Economic use of material
3. Exhibition of purpose and construction
4. Pleasing outlines and proportions
5. Appropriate but limited use of ornament

In parks, Tyrell stated "beauty is the first essential" and "no limit should be placed on the amount of art which may appropriately be displayed". In form "curves are preferable to straight lines, and should be adopted wherever construction requirements will permit". His opinion toward conformity to the environment was equally strong, stating "in a wild mountain region the bridge should be bold, while in a park it should contain fine ornament, and have a more finished appearance. The rule, generally, is to make the bridge more striking than its surroundings, so the eye will be naturally attracted to it".

Among designers of the first decades of the twentieth century, this idea of appropriate aesthetic design for various settings was illustrated in bridge sales catalogs. Various categories were presented, as illustrated in prominent American Engineer Daniel B. Luten's 1917 publication *Reinforced Concrete Bridges*. The "park bridge" type was ornamented with pierced concrete parapet walls, of the balustrade type, decorative light standards, and articulation of the components of the spandrels.

Edwin Thacher's 1899 observation that "architectural ornamentation" can be applied to durable concrete bridges "as sparingly or as lavishly as desired" was fully realized in the many bridges built under Baltimore municipal authority between 1920 and 1930; during that period nineteen concrete arch bridges were built in Baltimore City.

Bridge BC 2209 spans Gelston Run in the area of Gwynn's Falls Park. The park was one component of a scheme introduced by Frederick Law Olmsted, Jr., following his creation of Roland Park in the City of Baltimore at the end of the nineteenth century. His scheme proposed the maintenance of green areas in all the valleys along Jones Falls, Herring Run, Gwynn's Falls and parts of the shoreline of the Patapsco (Greene, 146). Gwynn's Falls Park was acquired by the City of Baltimore in 1902.

**When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?**

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

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**Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?**

The bridge is located in an area which does not appear to be eligible for historic designation.

**Is the bridge a significant example of its type?**

Bridge BC 2208 is a significant example of its type, as it retains many of the original elements and has been rehabilitated in a manner consistent with the Secretary of the Interior's *Standards*, including facing new elements in stone to match the original sections of the structure.

**Does the bridge retain integrity of important elements described in Context Addendum?**

This bridge was widened in 1992; however, the original stone faced spandrel walls and the arch barrel remain.

**Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?**

This bridge is a significant example of the work of the City of Baltimore Department of Public Works.

**Should the bridge be given further study before an evaluation of its significance is made?**

No further study of this bridge is required to evaluate its significance.

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**SURVEYOR:**

**Date bridge recorded** August 1998
**Name of surveyor** Caroline Hall
**Organization/Address** P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
**Phone number** (410) 296-1635 **FAX number** (410) 296-1670


*Maryland Historic Highway Bridges*
*Bridge Type* Concrete Arch
*MHT#* B-4636
*Map* Baltimore SW, Map D-12
*County* Baltimore
*Bridge # and name* BC 2209/Hilton Parkway over Gelston Run

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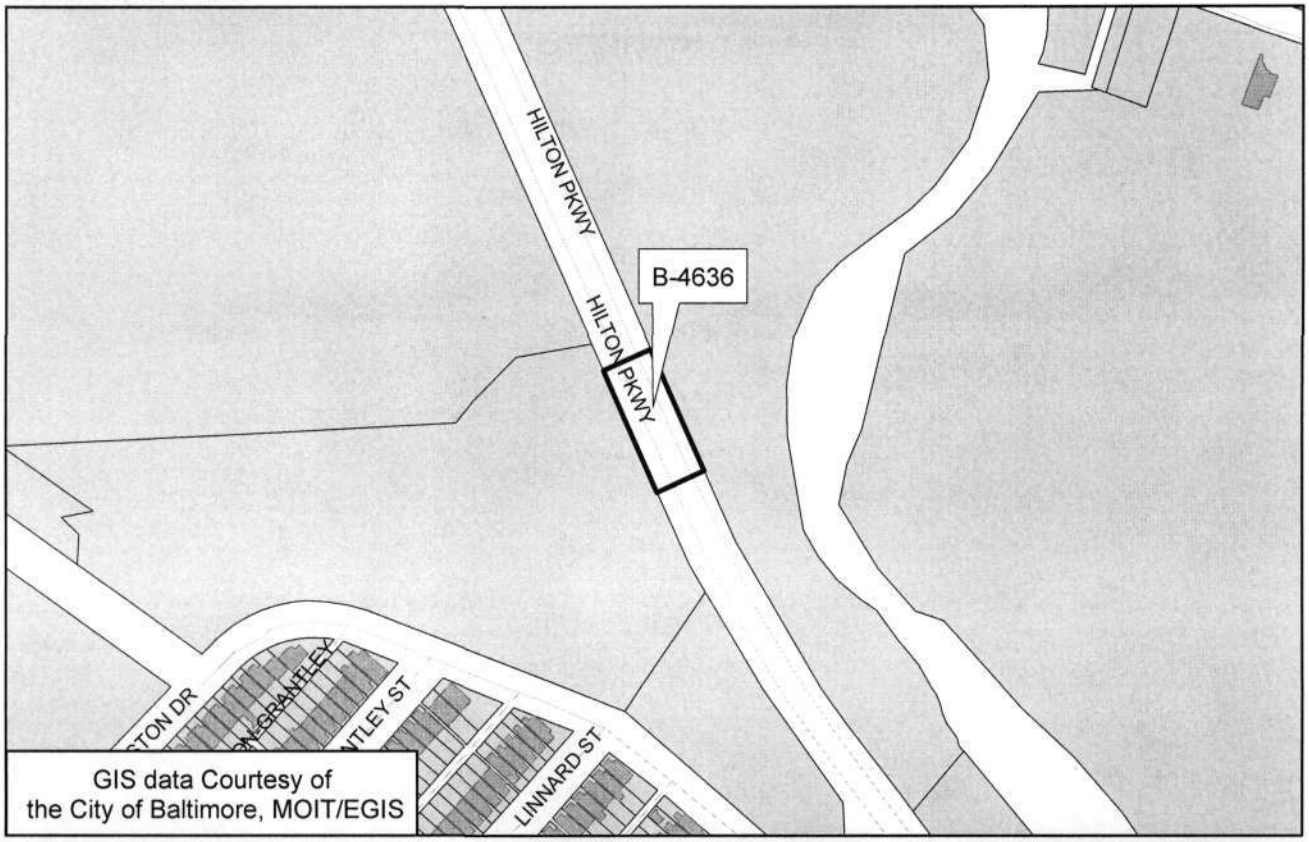
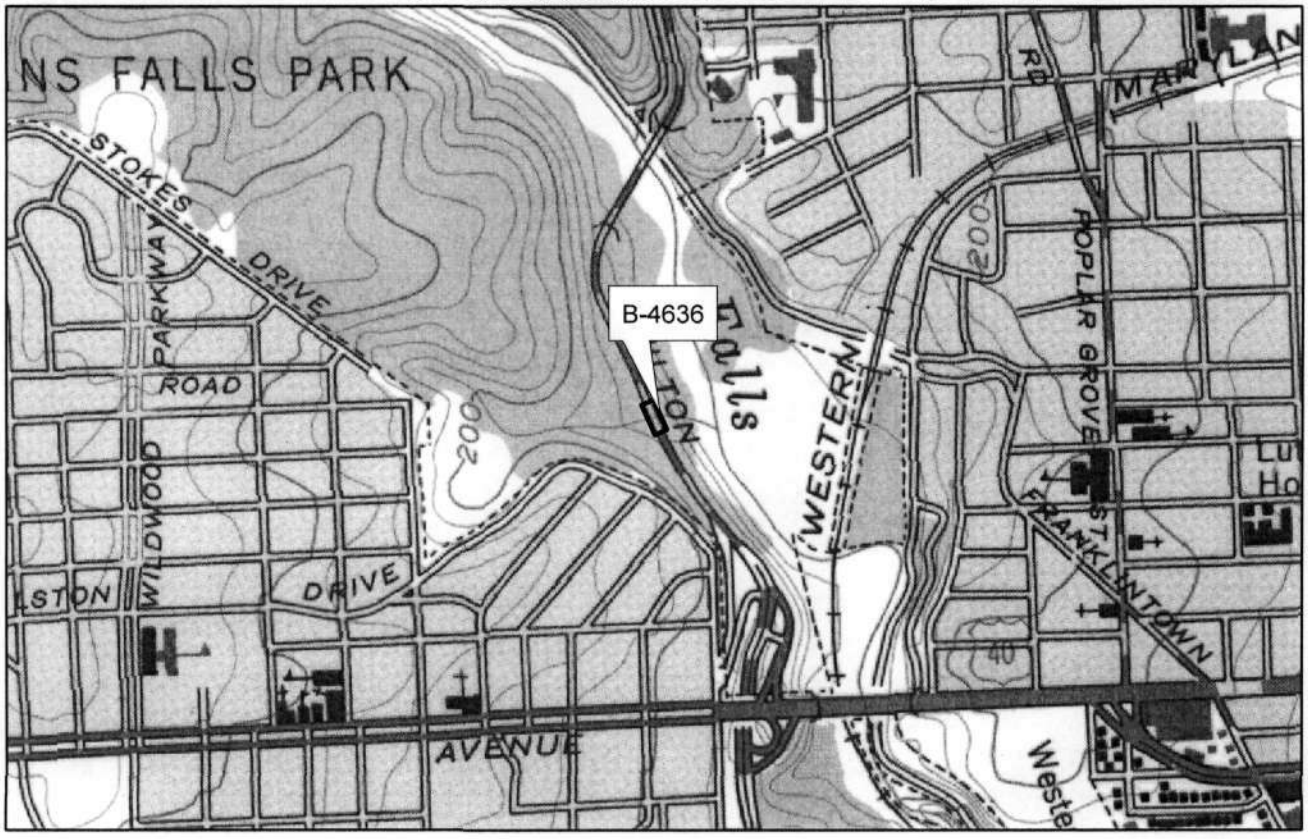
Bridge BC 2209
Hilton Parkway over Gelston Run
Baltimore City
Baltimore West Quad



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BRIDGE PLAQUE
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MD SHPO
WEST ELEVATION
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EAST ELEVATION

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